Department of **Water and Environmental Regulation**
Department of **Biodiversity, Conservation and Attractions**
GOVERNMENT OF WESTERN AUSTRALIA

Swan Canning catchment
Nutrient report 2017

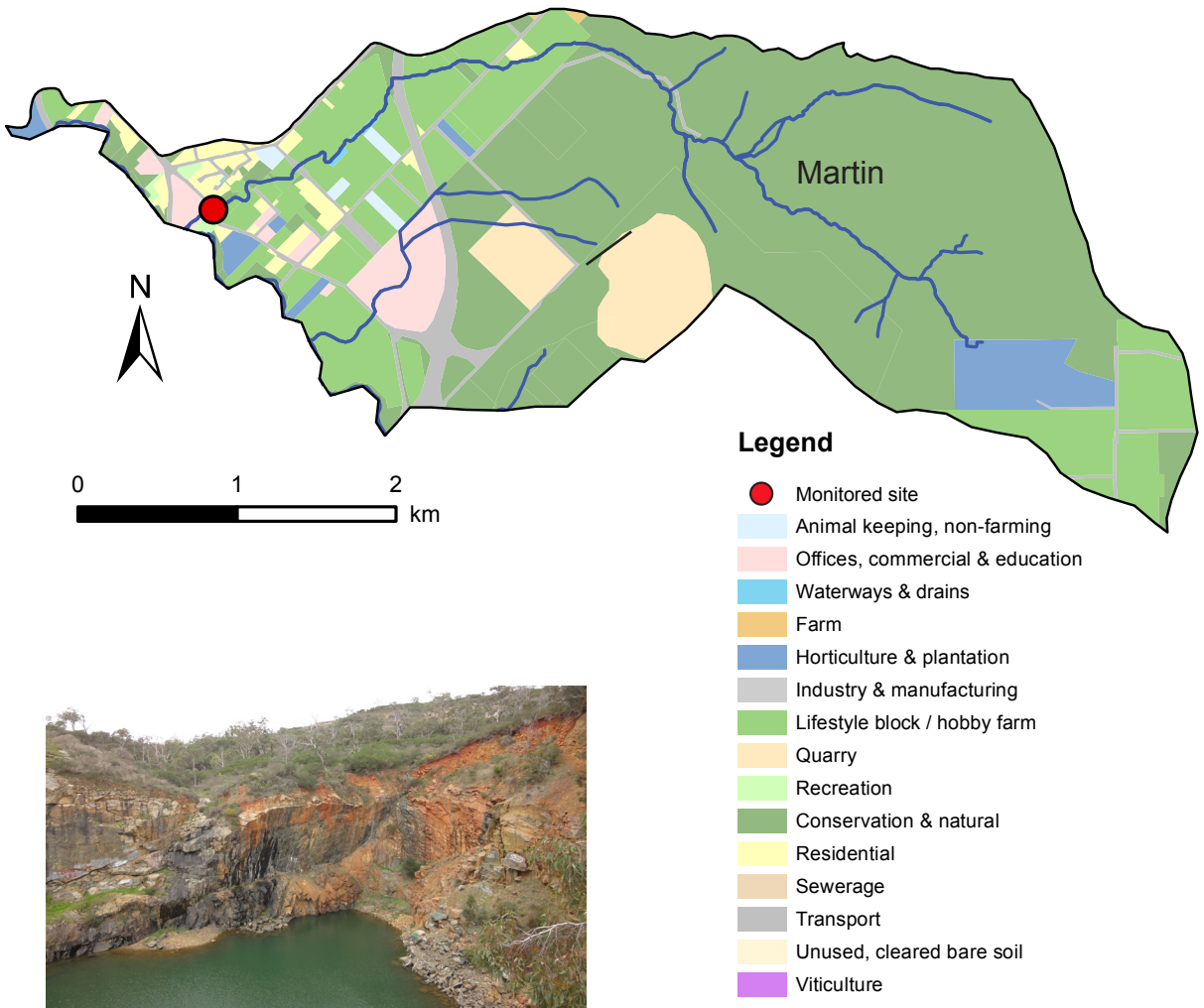
Ellis Brook

Ellis Brook is a largely natural, ephemeral system, drying out in summer. It was named after T.T. Ellis, a soldier who was involved in the Pinjarra massacre. Its headwaters are situated on the Darling Scarp from where it flows westwards, towards the Canning River in Gosnells.

Around half the catchment remains uncleared, though the western portion is taken up by lifestyle blocks and urban areas. The eastern edge of the catchment also has lifestyle blocks as well as some horticulture. There is a hardrock quarry on the southern boundary of the catchment as well as a decommissioned quarry in the centre. Ellis Brook Valley is in the central portion of the catchment and is recognised as one of the richest wildflower locations in the Perth Metropolitan area.

Soils types in the western portion of the catchment are red gravels and earths. As the brook flows over the scarp it passes through shallow red and yellow earths. On the coastal plain the soils are predominantly acidic yellow and red sands. These types of soils have better nutrient-retention capacities than the leached sands found further west on the coastal plain.

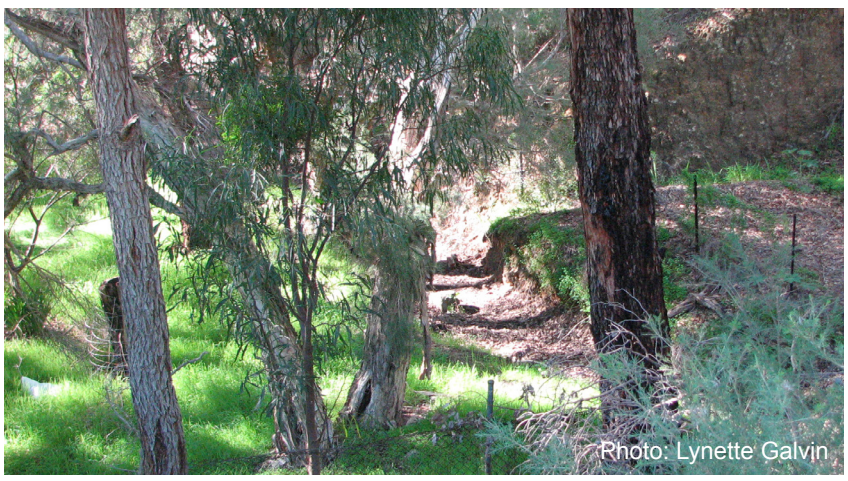
Water quality is monitored fortnightly at a site near the end the catchment, close to the Gosnells City Council Offices. This site was chosen to estimate the nutrient concentrations leaving the catchment, so the data may not accurately represent nutrient concentrations in upstream tributaries or other streams in the catchment.



Looking down into Barrington Quarry (decommissioned) in July 2015.

Ellis Brook – facts and figures

Average rainfall (2013–17)	~ 730 mm per year (Perth metro)
Catchment area	12.0 km^2 (total catchment)
Per cent cleared area (2005)	36% (total catchment)
River flow	Highly seasonal, flows only a few months each year
Main land uses (2005)	Conservation and natural (total catchment)



Ellis Brook near Lewis Road, note the abundance of exotic vegetation growing along the banks, June 2007.

Nutrient Summary: concentrations, rainfall and targets

Year	Site	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Annual rainfall (mm)	009225	703.0	807.8	607.2	503.8	860.8	608.2	782.4	674.4	617.8	715.8	854.0
TN median (mg/L)	EBGS01	0.39	0.65			0.45	0.29	0.44	0.39	0.35	0.28	0.35
TP median (mg/L)	EBGS01	0.015	0.033			0.019	0.013	0.022	0.019	0.022	0.017	0.023

TN short term target = 2.0 mg/L TN long term target = 1.0 mg/L TP short term target = 0.2 mg/L TP long term target = 0.1 mg/L

insufficient data to test target failing both short and long-term target passing short but failing long-term target passing both short and long-term target

* Best estimate using available data. # Statistical tests that account for the number of samples and large data variability are used for testing against targets on three years of winter data. Thus the annual median value can be above the target even when the site passes the target (or below the target when the site fails).

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